



*Exploring the World of Science*

## University of Michigan Science Olympiad 2021 Invitational Tournament

# Ornithology C

**Test length:** 50 Minutes

**Team name:** \_\_\_\_\_

**Team number:** \_\_\_\_\_

**Student names:** \_\_\_\_\_

Tiebreakers: 119, 131, 136, 137, 93, 27, 36, 117 (in order)

### Instructions (shown before students start the test)

Welcome to the University of Michigan 2021 Invitational Ornithology C test! Make sure you have a stable internet connection and are ready to compete!

For this test, you are allowed the following resources:

- A Google Meet/Zoom/Skype/Phone/Video call with your partner
- A "2 inch" binder/field guide, printed or in PDF format on your computer
- A copy of the 2021 National Bird List or a 2021 Official State Bird List

You MAY NOT take advantage of the following resources. Doing so will result in a disqualification plus 30 points added to your team's overall score:

- ANY internet resource
- Help from any person other than your partner
- A printed version of the test

### Introduction (shown after students start the test)

This test consists of 19 stations with a total of 144 questions, and you will have 50 minutes to complete it. The "in-person" design was to have 2 minutes and 20 seconds to work on each station, with a 10 second period to switch. Being an online exam, you may move around freely and spend as much time on each station as you would like, however, be wary of time.

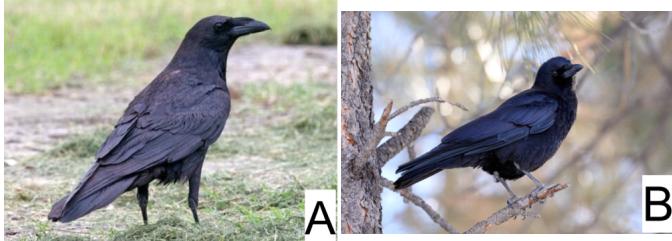
The Tiebreakers for this test will be: 119, 131, 136, 137, 93, 27, 36, 117 (in order)

**For all Identification Questions, please print the common names and scientific names exactly as shown on the National Ornithology Bird List.**

If you experience technical difficulties during the test:

- Immediately contact the event supervisor through the classroom feature on Scilympiad, stating clearly what issue you are having.
- If your work is not saving/submitting, take screenshots of your answers on Scilympiad and submit them to this google form (<https://docs.google.com/forms/d/19cRQLafN7EARRS7tZHC-8HOCT4B1F-4fYOSlION1kro/edit>). Try to stay within your allotted 50 minutes.

Station 1: Use these images for Questions 1-7



**1. (1.00 pts)** What is the Common Name of Species A?

**2. (1.00 pts)** What is the Scientific Name of Species B?

**3. (1.00 pts)** What Family (scientific name) are these two species from?

4. (1.50 pts) In which of the following regions of the United States can **BOTH** species be found in?

(Mark **ALL** correct answers)

- A) Northeast
- B) Southeast
- C) Midwest
- D) Southwest
- E) West

5. (1.00 pts) For **BOTH** species, what is the average clutch size?

- A) 1-4 eggs
- B) 4-7 eggs
- C) 8-11 eggs
- D) 12-15 eggs

6. (1.00 pts) At what age can Species A begin breeding?

7. (1.50 pts) Which of the following foods are consistent with the diet of Species B?

(Mark **ALL** correct answers)

- A) Seeds
- B) Berries
- C) Small Mammals
- D) Earthworms
- E) Other Bird Species

Station 2: Use these images for Questions 8-14



**8. (1.00 pts)** What Order (scientific name) are these two species from?

**9. (1.00 pts)** Which sex typically incubates the eggs for Species A?

(Mark **ALL** correct answers)

- A) Male
- B) Female

**10. (1.50 pts)** Describe the flight pattern for Species A.

**11. (1.50 pts)** What makes up Species B's primary diet?

(Mark **ALL** correct answers)

- A) Seeds
- B) Insects
- C) Sap
- D) Nuts
- E) Leaves

**12. (2.00 pts)** For **BOTH** species, what are some overlapping conditions at hatching?

(Mark **ALL** correct answers)

- A) Eyes Open
- B) Eyes Closed
- C) Pink Skin
- D) Grey Skin
- E) Blind
- F) Not Blind

**13. (1.00 pts)** True or False: Courtship behavior for Species B includes pointing bill up to display throat colors.

- True
- False

**14. (1.00 pts)** What is the IUCN conservation status of Species A?

- A) Least Concern
- B) Near Threatened

- C) Vulnerable
- D) Endangered
- E) Critically Endangered

Station 3: Use these images for Questions 15-21



A



B

**15. (1.00 pts)** What is the Scientific Name of Species A?

**16. (1.00 pts)** What is the Common Name of Species B?

**17. (1.00 pts)** What Family (scientific name) are these two species from?

**18. (1.50 pts)** In which North American Country(ies) does breeding commonly take place for **BOTH** species?

(Mark **ALL** correct answers)

- A) Greenland
- B) Canada
- C) United States
- D) Mexico
- E) Barbados

**19. (1.50 pts)** What is the primary diet for Species A?

(Mark **ALL** correct answers)

- A) Nuts
- B) Small Mammals
- C) Small Reptiles
- D) Berries
- E) Birds

**20. (1.50 pts)** What is Species B's common habitat?

(Mark **ALL** correct answers)

- A) Forests
- B) Woodlands
- C) Grasslands
- D) Swamps
- E) Fields

**21. (1.50 pts)** Which of the following describes an egg of Species B?

(Mark **ALL** correct answers)

- A) Grey
- B) White
- C) Speckled with Brown
- D) Blotched with Purple
- E) 1-2 inches

Station 4: Use these images for Questions 22-29



**22. (1.00 pts)** What is the Common Name of A?

**23. (1.00 pts)** What is the Common Name of B?

**24. (1.00 pts)** True or False: These two species from the same Family.

- True
- False

**25. (1.50 pts)** Fill in the Blank: The population of both Species A and Species B declined in the 1950s-1960s due to \_\_\_\_\_, however, began to recover after this was banned in the \_\_\_\_\_.

**26. (1.50 pts)** Which of the following is a main part of the diet for Species A?

(Mark **ALL** correct answers)

- A) Mammals
- B) Birds
- C) Fish
- D) Reptiles

**27. (3.00 pts)** Describe the common actions of a Species A male during breeding season. What is this action called?

**28. (1.00 pts)** What is the max speed that Species B can fly during a dive for prey (from 1km above the ground)?

(Mark **ALL** correct answers)

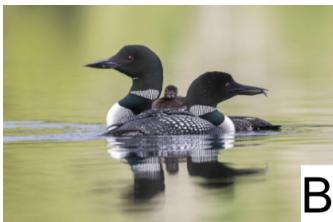
- A) 25-35 mph
- B) 35-65 mph
- C) 65-85 mph
- D) 85-100 mph
- E) 100-150 mph
- F) 150+ mph

**29. (1.50 pts)** In which of the following regions of the United States can Species B be found in?

(Mark **ALL** correct answers)

- A) Northeast
- B) Southeast
- C) Midwest
- D) Southwest
- E) West

Station 5: Use these images for Questions 30-36



**30. (1.00 pts)** What is the Scientific Name of Species B?

**31. (1.00 pts)** What Order (scientific name) is Species A from?

**32. (1.50 pts)** In which of the following regions of the United States can Species A commonly be found in?

(Mark **ALL** correct answers)

- A) Northeast
- B) Southeast
- C) Midwest
- D) Southwest
- E) West

**33. (1.50 pts)** What is Species B's common habitat?

(Mark **ALL** correct answers)

- A) Forests
- B) Woodlands
- C) Grasslands
- D) Lakes
- E) Ponds

**34. (2.00 pts)** Which of the following actions does Species B take for territorial display?

(Mark **ALL** correct answers)

- A) Lifting body upright
- B) Sticking one foot up out of water
- C) Wagging foot
- D) Flapping wings
- E) Tremolo calls

**35. (2.00 pts)** Which of the following are impacts of Species B's conservation?

(Mark **ALL** correct answers)

- A) Commercial Fishing
- B) Acid Rain
- C) Hunting
- D) Motorboats
- E) Oil Spills

**36. (3.00 pts)** In a sentence, briefly describe the famous event that happened in January 2009 and which Species was involved (A or B)?

Station 6: Use these images for Questions 37-43



**37. (1.00 pts)** What is the Scientific Name of this Species?

**38. (1.00 pts)** True or False: This species doesn't typically breed in colonies.

- True     False

**39. (2.00 pts)** Which of the following actions can be seen when this Species is in flight?

(Mark **ALL** correct answers)

- A) "S" neck Shape
- B) Tucked in legs
- C) Extended wings
- D) Bill pointed skyward
- E) "Clapper" bill tips

**40. (1.50 pts)** Which of the following are characteristics of nesting for this species?

(Mark **ALL** correct answers)

- A) 6-9 egg clutch size
- B) 1 brood each year
- C) White/Cloud colored eggs
- D) 27 day incubation period

**41. (1.50 pts)** What is the main prey for this Species' diet?

(Mark **ALL** correct answers)

- A) Shrimp
- B) Insects
- C) Fish
- D) Rodents

**42. (1.00 pts)** At what age can this species start to fly?

- A) 30 days
- B) 45 days
- C) 60 days
- D) 70 days

**43. (1.50 pts)**

True or False for the Following Statements: 1. Nests are not reused 2. This species is monogamous within the breeding season 3. This species don't stay with the same mating partners.

- A) T, T, T
- B) F, T, T
- C) F, T, F
- D) F, T, T
- E) T, F, T
- F) F, F, F

Station 7: Use these images for Questions 44-51



**44. (1.00 pts)** What is the Common Name for Species A?

**45. (1.00 pts)** What is the Scientific Name for Species B?

**46. (1.50 pts)** In which of the following regions of the United States can Species A commonly be found in?

(Mark **ALL** correct answers)

- A) Northeast
- B) Southeast
- C) Midwest
- D) Southwest
- E) West

**47. (1.50 pts)** Which of the following are correct average measurements for Species A?

(Mark **ALL** correct answers)

- A) Length: 3 inches
- B) Length: 4 inches
- C) Wingspan: 7-8 inches
- D) Wingspan: 8-9 inches
- E) Weight: 2 ounces
- F) Weight: 3 ounces

**48. (2.00 pts)** In a sentence, describe the best way of visually distinguishing a male, female, and immature bird of Species A.

**49. (1.50 pts)** Which of the following are common predators of Species B?

(Mark **ALL** correct answers)

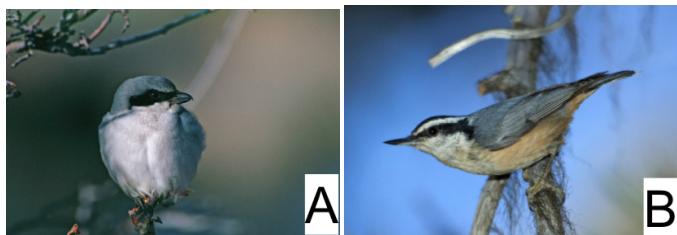
- A) American Kestrels
- B) Northern Harriers
- C) Merlins
- D) American Kestrels

**50. (2.00 pts)** In one sentence, name one key visual characteristic that distinguishes between male and female birds of Species B.

**51. (1.00 pts)** True or False: At the beginning of breeding season and at the breeding grounds, Species B males don't attack other males more intensely when females arrive.

- True
- False

Station 8: Use these images for Questions 51-58



**52. (1.00 pts)** What is the Common Name for Species A?

**53. (1.00 pts)** What is the Scientific Name for Species B?

**54. (1.00 pts)** True or False: Both Species A and B are a part of the same Family.

- True     False

**55. (1.00 pts)** What is the IUCN conservation status of Species A?

- A) Least Concern  
 B) Near Threatened  
 C) Vulnerable  
 D) Endangered  
 E) Critically Endangered

**56. (1.00 pts)** On average, what percentage of Species A's population increases or decreases each year (to the nearest WHOLE NUMBER)?

**57. (1.50 pts)** Which of the following characteristics describes an egg for Species B?

(Mark **ALL** correct answers)

- A) Pale Blue  
 B) Cream  
 C) Red-Brown Speckles  
 D) Dark/Black Speckles  
 E) 17 day incubation period  
 F) 1.25 inches long

**58. (1.00 pts)** In a short sentence, what specific feature helps Species B keep grip on tree trunks and branches?

Station 9: Use these images for Questions 59-65



59. (1.00 pts) What is the Common Name for Species A?

60. (1.00 pts) What is the Scientific Name for Species B?

61. (1.50 pts) In which of the following regions of the United States can Species A commonly be found in?

(Mark **ALL** correct answers)

- A) West
- B) Northeast
- C) Southeast
- D) Midwest
- E) Southwest

62. (1.00 pts) For Species A, do the female, male, or both species do most of the nest-building?

(Mark **ALL** correct answers)

- A) Female
- B) Male

63. (1.50 pts) In what type of location does Species A typically build their nests?

(Mark **ALL** correct answers)

- A) Cavities
- B) Branches
- C) Bushes
- D) Railings
- E) Ground
- F) Cliffs

64. (1.50 pts) What is the primary diet for Species B?

(Mark **ALL** correct answers)

- A) Seeds
- B) Nuts
- C) Insects
- D) Fruits
- E) Small Mammals

**65. (2.00 pts)** How does Species B establish and maintain their territories?

(Mark **ALL** correct answers)

- A) Callings (Sounds)
- B) Fighting
- C) Chasing
- D) Visual Displays

Station 10: Use these images for Questions 66-72



**66. (1.00 pts)** Which one of these birds don't belong to the same family as the other two species presented?

- A) Species A
- B) Species B
- C) Species C
- D) None: they are all from the same family

**67. (1.00 pts)** What is the Common Name for Species A?

**68. (1.00 pts)** What is the Scientific Name for Species B?

**69. (1.00 pts)** What is the Common Name for Species C?

**70. (1.50 pts)** In which of the following regions of the United States can Species A commonly be found in?

(Mark **ALL** correct answers)

- A) Northeast
- B) Southeast
- C) Midwest
- D) Southwest
- E) West

**71. (1.50 pts)**

True or False for the Following Statements: 1. Males of Species B helps build the nest 2. Males of Species B tends to guard and defend territories 3. There is no significant difference in size between males and females of Species B

- A) F, T, T
- B) T, T, T
- C) F, T, F
- D) F, T, T
- E) T, F, T
- F) F, F, F

**72. (1.00 pts)** How many days after hatching do the nestlings of Species C leave the nest?

(Mark **ALL** correct answers)

- A) 9-12 days
- B) 13-16 days
- C) 17-20 days
- D) 21-24 days
- E) 25-28 days

Station 11: Use these images for Questions 73-79



**73. (1.00 pts)** What is the Scientific Name for Species A?

**74. (1.00 pts)** What is the Common Name for Species B?

**75. (1.50 pts)** In which of the following regions of the United States can Species A commonly be found in?

(Mark **ALL** correct answers)

- A) Northeast
- B) Southeast
- C) Midwest
- D) Southwest
- E) West

**76. (2.00 pts)** In a sentence, describe the main differences between a male and female of Species A. What gender is the bird in the picture above?

**77. (1.00 pts)** True or False: Species B tend to only defend spaces closer to their nest rather than larger feeding territories.

- True
- False

**78. (1.00 pts)** On average, how long does it take for a Species B to build a nest?

(Mark **ALL** correct answers)

- A) 4-5 days
- B) 6-8 days
- C) 9-10 days
- D) 11-14 days
- E) 14+ days

**79. (1.50 pts)** Which of the following foods are consistent with the diet of Species B?

(Mark **ALL** correct answers)

- A) Insects
- B) Fruit
- C) Seeds
- D) Nectar
- E) Nuts
- F) Small Mammals

Station 12: Use these images for Questions 80-87



**80. (1.00 pts)** What is the Common Name for this Species?

**81. (1.50 pts)** Which of the following are a part of the diet for this Species?

(Mark **ALL** correct answers)

- A) Seeds
- B) Small Birds
- C) Insects
- D) Fruits
- E) Small Mammals

**82. (1.00 pts)** True or False: Nest sites are reused year to year.

- True
- False

**83. (1.00 pts)** What is the average incubation period for this species?

(Mark **ALL** correct answers)

- A) 20-23 days
- B) 24-28 days
- C) 29-32 days
- D) 33-34 days
- E) 35-40 days

**84. (0.50 pts)** Is this species diurnal or nocturnal?

- A) Diurnal
- B) Nocturnal

**85. (2.00 pts)** Name the two distinct attributes that give the ability to hunt for prey at night.

86. (1.50 pts) In a sentence or two, describe the main difference between a male and a female for this species.

87. (1.00 pts) True or False: This species is the same type of owl from the Harry Potter series

- True  False

Station 13: Use these images for Questions 88-94



88. (1.00 pts) What Family (scientific name) are both these species from?

89. (1.00 pts) What is the IUCN conservation status for Species A?

- A) Least Concern  
 B) Near Threatened  
 C) Vulnerable  
 D) Endangered  
 E) Critically Endangered

90. (1.00 pts) Which part of the United States can **BOTH** birds be typically found in?

(Mark **ALL** correct answers)

- A) Eastern US  
 B) Western US

91. (1.00 pts) Under protection after the 1970s, the population of Species A has increased and become stable. What were the two primary things that caused this population decline prior to this?

\_\_\_\_\_

**92. (1.00 pts)** True or False: Species A typically do their own catching and fishing for food, which is a primary part of their diet.

- True    False

**93. (2.00 pts)** In a sentence or two, answer the following question and provide a brief explanation. True or False: Species B was not affected heavily by the DDT pesticide poisoning.

\_\_\_\_\_

**94. (1.00 pts)** How many eggs are typically in a clutch for Species B?

\_\_\_\_\_

Station 14: Use these images for Questions 95-102



**95. (1.00 pts)** What is the Common Name for Species A?

\_\_\_\_\_

**96. (1.00 pts)** What is the Scientific Name for Species B?

\_\_\_\_\_

**97. (1.00 pts)** Which of the following foods make up the primary diet for Species A?

- A) Small Mammals  
 B) Nuts

- C) Nectar
- D) Seeds
- E) Fruit
- F) Insects

**98. (1.50 pts)** Which of the following are common predators for Species A?

(Mark **ALL** correct answers)

- A) Garter Snakes
- B) Red Squirrel
- C) Crows
- D) Dogs
- E) Cats
- F) Jays

**99. (1.00 pts)** Which gender for Species A tends to have a brighter yellow color?

(Mark **ALL** correct answers)

- A) Male
- B) Female

**100. (1.50 pts)** Species B is the state bird for which of the following states:

(Mark **ALL** correct answers)

- A) Massachusetts
- B) New Jersey
- C) Iowa
- D) Michigan
- E) Washington
- F) Virginia

**101. (1.50 pts)** In which of the following regions of the United States can Species B commonly be found in?

(Mark **ALL** correct answers)

- A) Northeast
- B) Southeast
- C) Midwest
- D) Southwest
- E) West

**102. (1.50 pts)** Which of the following parts of a Species B female makes it distinguishable from a male species?

(Mark **ALL** correct answers)

- A) Bill

- B) Tail
- C) Color
- D) Crown
- E) Belly

Station 15: Use these images for Questions 103-109



**103. (1.00 pts)** What is the Common Name of this Species?

**104. (1.00 pts)** Which of the following colors are not visible on the adult for this species?

(Mark **ALL** correct answers)

- A) Red
- B) Orange
- C) Yellow
- D) Green
- E) Blue
- F) Purple

**105. (1.00 pts)** What is the primary habitat for this species?

- A) Forests
- B) Woodlands
- C) Grasslands
- D) Lakes
- E) Marshes

**106. (1.50 pts)** In which of the following regions of the United States can this species commonly be found in?

(Mark **ALL** correct answers)

- A) Northeast
- B) Southeast
- C) Midwest
- D) Southwest

E) West

**107. (1.00 pts)** What is the typical incubation period for an egg of this species?

(Mark **ALL** correct answers)

- A) 13-16 days
- B) 17-19 days
- C) 20-23 days
- D) 24-27 days
- E) 28-30 days
- F) 30+ days

**108. (1.50 pts)** Which of the following foods are consistent with the diet of this species?

(Mark **ALL** correct answers)

- A) Worms
- B) Nuts
- C) Lotus
- D) Mice
- E) Spiders
- F) Beetles

**109. (1.50 pts)** How many days after hatching do the nestlings of this species leave the nest?

(Mark **ALL** correct answers)

- A) 7-10 days
- B) 11-13 days
- C) 14-17 days
- D) 18-24 days
- E) 25-30 days
- F) 30+ days

Station 16: Use these images for Questions 110-119



A



B

**110. (1.00 pts)** What is the Scientific Name of Species A?

**111. (1.00 pts)** What is the Common Name of Species B?

**112. (1.50 pts)** In which of the following regions of the United States is Species A not commonly found in?

(Mark **ALL** correct answers)

- A) Northeast
- B) Southeast
- C) Midwest
- D) Southwest
- E) West

**113. (2.00 pts)** Is the species in the picture A male or female? Explain how you can distinguish the two.

**114. (1.50 pts)** Species A was introduced to the United States from which continent?

(Mark **ALL** correct answers)

- A) Europe
- B) Africa
- C) Asia
- D) Australia
- E) South America
- F) Antarctica

**115. (1.00 pts)** Species B can be found in every state in the US except for:

**116. (1.00 pts)** True or False: Species B is the most sought bird game by hunters.

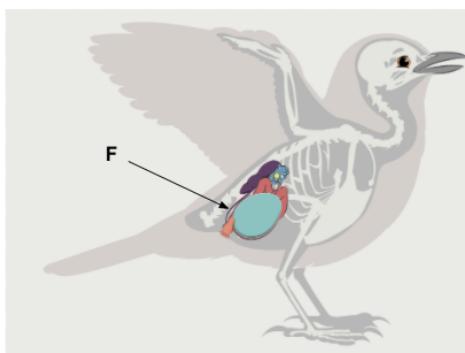
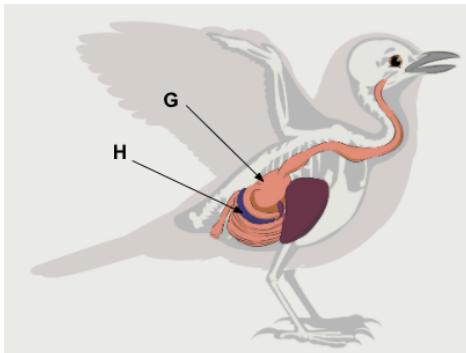
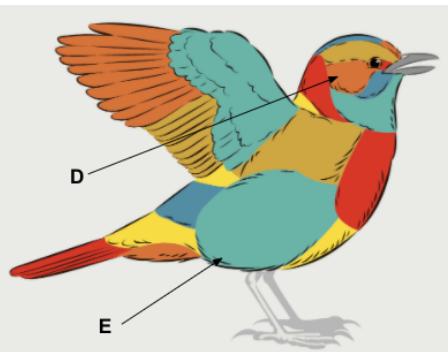
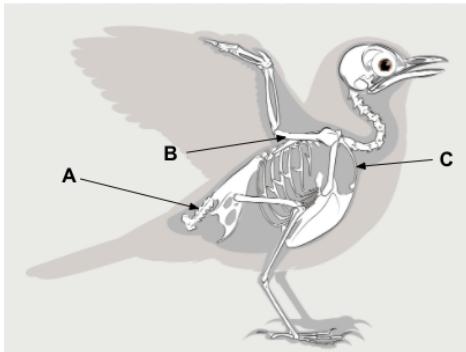
- True
- False

**117. (3.00 pts)** Is the species in the picture B male or female? Explain how you can distinguish the two.

**118. (3.00 pts)** When Species B is threatened, what is the difference between how males and females react?

**119. (4.00 pts)** What current Michigan initiative allows for hunting of one of these birds during the fall, and what are its goals? Which bird is it (A or B)?

Station 17: Use these images for Questions 120-127



**120. (0.75 pts)** What is A pointing to?

**121. (0.75 pts)** What is B pointing to?

**122. (0.75 pts)** What is C pointing to?

**123. (0.75 pts)** What is D pointing to?

**124. (0.75 pts)** What is E pointing to?

**125. (0.75 pts)** What is F pointing to?

**126. (0.75 pts)** What is G pointing to?

**127. (0.75 pts)** What is H pointing to?

Station 18: Identification. Provide the **COMMON NAME** for each species based on the image/video presented in each question. (Questions 128-137)

**128. (0.75 pts)** Which species is this?



**129. (0.75 pts)** Which species is this?



**130. (0.75 pts)** Which species is this?



**131. (1.50 pts)** Which species is this?

Question 131



**132. (1.50 pts)** Which species is this?



**133. (0.75 pts)** Which species is this?



**134. (1.50 pts)** Which species is this?

Question 134



**135. (1.50 pts)** Which species is this?



**136. (1.50 pts)** Which species is this?

**Question 136**



**137. (1.50 pts)** Which species is this?



Station 19: Questions 138-144 (No Images)

**138. (1.00 pts)** During what time of the year do most bird strikes occur?

- A) January to May
- B) May to September
- C) August to November
- D) July to October
- E) October to December
- F) December to March

**139. (1.00 pts)** How many bird strikes with civil aircrafts have been reported in the last 30 years?

**140. (1.00 pts)** What is the average resting heart rate of a bird? What is the average heart rate while in flight? (all answer in beats per minute)

- A) Resting: 100, Flying: 300
- B) Resting: 500, Flying: 1200
- C) Resting: 300, Flying: 800
- D) Resting: 200, Flying: 600
- E) Resting: 400, Flying: 1000
- F) Resting: 70, Flying: 150

**141. (1.00 pts)** Which species is the closest living relative to the modern bird?

- A) Platypus
- B) Lizards
- C) Turtles
- D) Gharial
- E) Crocodile
- F) Alligator

**142. (1.00 pts)** Follow up: What is the scientific name of the common ancestor between the modern bird and its closest relative?

**143. (2.00 pts)** In a sentence or two, answer the following question: Are owls able to move their eyes, and how far can they rotate their neck to achieve a 360 degree field of view?

**144. (1.00 pts)** What is the state bird of Michigan? (provide the scientific name)

Congratulations on completing the University of Michigan 2021 Invitational Ornithology C test!

If you have any questions or concerns pertaining to this event, please email [tec.umichscioly@umich.edu](mailto:tec.umichscioly@umich.edu) (<mailto:tec.umichscioly@umich.edu>), and we will try to get back to you as soon as we can.

© 2021 - powered by Scilympiad (<https://scilympiad.com>) | Tournaments (/umso/Home/Subscribers)

[Terms of Use \(/ToS.html\)](#) | [Privacy \(/Privacy.html\)](#) | [Cookies Policy \(/CookiePolicy.html\)](#) | [Support \(/umso/Support\)](#) | [Contact \(/umso/Home/Contact\)](#)